

Reg. No: 

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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
**(AUTONOMOUS)**  
**MCA I Year I Semester Regular Examinations July-2021**  
**COMPUTER ORGANIZATION**

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

**UNIT-I**

- 1 Define and explain Boolean algebra and simplification of Boolean expressions. L1 12M
- OR**
- 2 Convert the following: L3 12M
- a  $(41)_{10} = (?)_2$
- b  $(0.6875)_{10} = (?)_2$
- c  $(10110001101011)_2 = (?)_{16}$
- d  $(B65F)_{16} = (?)_{10}$

**UNIT-II**

- 3 Discuss about the cache memory with different types of mappings. L6 12M
- OR**
- 4 Define and Explain Micro Programmed Control with Micro Program example. L1 12M

**UNIT-III**

- 5 a Explain about assembler directives. L2 6M
- b Explain about Data transfer instructions. L1 6M
- OR**
- 6 Discuss about conditional and unconditional transfer instructions with example. L6 12M

**UNIT-IV**

- 7 What is DMA? Draw the block diagram for DMA controller and explain about DMA transfer in a computer. L1 12M

**OR**

- 8 a Explain about Daisy chaining. L5 6M
- b Explain about Parallel priority. L5 6M

**UNIT-V**

- 9 a Explain about Parallel Processing and its Types. L2 6M
- b Explain the concept of Pipelining with clear example and with neat sketch. L2 6M

**OR**

- 10 Explain about Inter Process Communication & Synchronization in detail. L2 12M

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